Land Use and Environmental Service Agency
(Code Enforcement)

NC Mechanical Code

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306.3 - **Question:** I am installing an appliance in the attic. If I install it adjacent to the opening, where it can be serviced standing on the pull down or a portable ladder, will that be code compliant?

Answer: Yes, Section 306.3 Exception #1 states the passageway and service space are not required where the appliance can be serviced and removed through the opening.

Since this exception is under the section for appliances installed in attics, the intent is to access them via ladder (permanent or portable).

306.3 Appliances in attics. Attics containing appliances shall be provided with an opening and unobstructed passageway large enough to allow removal of the

largest appliance. The passageway shall not be less than 30 inches (762 mm) high and 22 inches (559 mm) wide and not more than 20 feet (6096 mm) in length measured along the centerline of the passageway from the opening to the appliance. The passageway shall have continuous solid flooring not less than 24 inches (610 mm) wide. A level service space not less than 30 inches (762 mm) deep and 30 inches (762 mm) wide shall be present at the front or service side of the appliance. The clear access opening dimensions shall be a minimum of 20 inches by 30 inches (508 mm by 762 mm), and large enough to allow removal of the largest appliance.

Exceptions:

1. The passageway and level service space are not required where the appliance is capable of being serviced and removed through the required opening.

2. Where the passageway is not less than 6 feet (1829 mm) high for its entire length, the passageway shall not be limited in length.

400 Chapter 4 Ventilation

500 Chapter 5 Exhaust Systems

507.2.3 - Question: Are there any hood requirements for a domestic range installed in a breakroom?

Answer: The code allows up to 2 domestic ranges installed in dwelling units, churches, schools, day care centers, break areas and similar installations.
The code exempts these areas because of their frequency of use, duration and the nature of the cooking. A breakroom will not have the same use as catering kitchen. The code does not specify the fuel source for the domestic ranges, gas or electric.
507.2.3 Domestic cooking appliances used for commercial purposes. Domestic cooking appliances utilized for commercial purposes shall be provided with Type I

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or Type II hoods as required for the type of appliances and processes in accordance with Sections 507.2, 507.2.1 and 507.2.2.

Exception: A maximum of two domestic ranges installed in dwelling units, churches, schools, day care centers, break areas and similar installations.

600 Chapter 6 Duct Systems

601.2 - Question: I was turned down on plan review for not providing returns in each of the rooms. The notes said corridors could not be used as a return path.

Answer: Section 601.2 prohibits using corridors as supply, return, exhaust, relief or ventilation air paths. Not providing returns in the rooms will force the air to move to the corridor to return back to the HVAC equipment. Rooms such as toilet rooms, bathrooms, dressing rooms etc, that open directly onto the corridor; can use the corridor as a source of makeup air. Note, these type of rooms will have a form of exhaust. Nothing prohibits conditioning the corridor.
601.2 Air movement in egress elements. Corridors shall not serve as supply, return, exhaust, relief or ventilation air ducts.

Exceptions:

1. Use of a corridor as a source of makeup air for exhaust systems in rooms that open directly onto such corridors, including toilet rooms, bathrooms, dressing rooms, smoking lounges and janitor closets, shall be permitted, provided that each such corridor is directly supplied with outdoor air at a rate greater than the rate of makeup air taken from the corridor.

2. Where located within a dwelling unit, the use of corridors for conveying return air shall not be prohibited.

3. Where located within tenant spaces of 1,000 square feet (93 m2) or less in area, use of corridors for conveying return air is permitted.

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4. Incidental air movement from pressurized rooms within health care facilities, provided that the corridor is not the primary source of supply or return to the room.

700 Chapter 7 Combustion Air

800 Chapter 8 Chimneys & Vents

900 Chapter 9 Specific Appliances

1000 Chapter 10 Boilers & Water Heaters

1100 Chapter 11 Refrigeration

1200 Chapter 12 Hydronic Systems

1300 Chapter 13 Fuel Oil Piping

1400 Chapter 14 Solar Systems

Policy - Question: Can the corridor wrap around an airhandler so dampers are not required, if the airhandler only serves the corridor?

Answer: Yes, after discussing the issue with Jeff Vernon. The following interpretation was agreed upon:

1. The unit can only serve the corridor.
2. Only the unit serving the corridor can occupy the space.
3. This would not be allowed in an exit passageway.

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Policy

NCECC - 503.2.9.3 - Question: I keep hearing about Appendix 5 of the energy code, is it required? If so, when?

Answer: Appendix 5 is a required document HVAC installations at the final on commercial projects.
This document must be completed by a NC licensed design professional. In the event the project does not have a design professional, like for like change out; the contractor is permitted to complete the form.
To give our customers proper notice of this requirement, Mecklenburg County Code Enforcement will require this form for all projects that is permitted on or after July 1, 2016. The form can be given to the inspector at final, or a more preferable method is for it to be upload prior to the final inspection, similar to how hood certifications are handled.
503.2.9.3 System installation statement. A North Carolina licensed design professional shall prepare and sign the Statement of Compliance –HVACSystem Installation (Appendix 5). This statement shall be submitted to the code official and the facility owner.

Exception: The HVAC contractor will be allowed to prepare the Statement of Compliance when a building permit is issued for a project without the seal of a licensed design professional as allowed by an exception under NC State Building Administrative Code and Policies: Section 204.3.5.

Other

Other - Question: Is it permissible to route refrigerant or condensate line in a residential elevator shaft? (single family)

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Answer: We cannot find any code that prohibits routing refrigerant or condensate lines in a elevator shaft in a single family home. If the manufacturer of the elevator doesn't prohibit it, then we see no reason it would not be allowed.

Other - Question: I am changing out an 80% furnace in a crawlspace. The existing furnace is vented by a power exhauster on the foundation wall. Can I use the power exhauster to vent the new furnace?

Answer: This will be determined by the manufacturer's installation instructions. Some manufacturers prohibit or place limits (either distance or specific type) on the use of power exhausters.

Manufacture's Installation Instructions - Question: I am requesting temporary heat, but the manufacture's warranty states the warranty if voided on the equipment if I use it for temporary heat. Can you help me?

Answer: The temporary heat is a service we provide for qualifying projects. We have no control over the manufacturer and their warranty policies.

Other - Question: What is the policy about using a smoke detector to shut down the airhandler in an apartment?

Answer: This is not a policy, it is an accepted alternate method. The code requires a dynamic damper listed to UL555C. At the time this method was approved, they did not produce a dynamic damper listed to UL555C. This was an alternate that was agreed upon between Mecklenburg County Code Enforcement and NCDOI, that would allow the use of a static damper. The original interpretation is attached.

Policy - Question: We would like to use Reflectix's bubble duct insulation. It has an R-8 value, would Mecklenburg County accept this?

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Answer: After reviewing the product, we would accept it conditionally. The product itself seems very sound. The max temp rating, smoke development, fire spread; it meets all the required standards in section 604.3 NCMC.
The installation requires the use of a spacing material to achieve a .75 inch air space. This spacing material has specific intervals it must be installed at to achieve the R-value. We would require an IBA to inspect this spacing material before it is covered up. Inspecting the spacing material would be an additional inspection outside the normal sequence of inspections.
Attached is the spec sheet for the Reflectix Bubble Duct Insulation.
604.3 Coverings and linings. Coverings and linings, including adhesives when used, shall have a flame spread index not more than 25 and a smoke-developed index not more than 50, when tested in accordance with ASTM E 84 or UL 723, using the specimen preparation and mounting procedures of ASTM E 2231. Duct coverings and linings shall not flame, glow, smolder or smoke when tested in accordance with ASTM C 411 at the temperature to which they are exposed in service. The test temperature shall not fall below 250ºF (121ºC).

2015 Residential Code - M1503.4 - Question: Can you now use gravity dampers on makeup air to residential hoods? I heard there was a code change.

Answer: The 2015 International Residential Code changed the language and now allows gravity dampers. After discussing this code change, and taking into consideration that the change will be in North Carolina's next code cycle; we have decided to accept this as an alternate method. This change was only in the 2015 IRC, it only applies to one- and two-family homes and townhouses. This will not apply to apartments or condos. If the manufacturer of the hood requires an electric damper, then that requirement will take precedence. The section also requires the dampers to be accessible for inspection, service, repair and replacement.
2015 IRC

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M1503.4 Makeup air required. Exhaust hood systems capable of exhausting in excess of 400 cubic feet per minute (0.19 m3 /s) shall be mechanically or naturally provided with makeup air at a rate approximately equal to the exhaust air rate. Such makeup air systems shall be equipped with not less than one damper. Each damper shall be a gravity damper or an electrically operated damper that automatically opens when the exhaust system operates. Dampers shall be accessible for inspection, service, repair and replacement without removing permanent construction or any other ducts not connected to the damper being inspected, serviced, repaired or replaced.

2014 NEC - Question: What are the new access requirements for duct heaters?

Answer: There are new access requirements for duct heaters in the 2014 NEC that go into effect April 1, 2016.

424.66

(B) Limited Access. Where the enclosure is located in a space above a ceiling, all of the following shall apply:

(1) The enclosure shall be accessible through a lay-in type ceiling or an access panel(s).

(2) The width of the working space shall be the width of the enclosure or a minimum of 762 mm (30 in.), whichever is greater.

(3) All doors or hinged panels shall open to at least 90 degrees.

(4) The space in front of the enclosure shall comply with the depth requirements of Table 110.26(A)(1). A horizontal ceiling T-bar shall be permitted in this space.